

THERAPEUTIC AND DIAGNOSTIC TOOLS
FOR IMPAIRED GLUCOSE TOLERANCE CONDITIONS

5

Cross Reference To Related Applications

This application is a continuation of application Serial Number 08/857,076,
filed August 3, 2000, which is a continuation ~~continued prosecution application~~ of Serial
Number 08/857,076, filed May 15, 1997. *now US Pat. 6,225,120.*

10 *R -*
4/11/03

Statement as to Federally Sponsored Research

This invention was made in part with Government funding, and the
Government therefore has certain rights in the invention.

Background of the Invention

This invention relates to compositions and methods useful for delaying or
ameliorating human diseases associated with glucose intolerance.

Diabetes is a major disease affecting over 16 million individuals in the
United States alone at an annual cost of over 92 billion dollars.

20

Type I diabetes or insulin-dependent diabetes (IDDD) is an autoimmune
disease. In the IDDM patient, the immune system attacks and destroys the insulin-
producing beta cells in the pancreas. The central role of insulin in human
metabolism is to aid in the transport of glucose into muscle cells and fat cells. The
body's inability to produce insulin results in hyperglycemia, ketoacidosis, thirst,
and weight loss. In addition, diabetics often suffer from chronic atherosclerosis
and kidney and eyesight failure. A patient with IDDM requires daily injections of
insulin to survive.

25

The most common form of diabetes is non-insulin dependent diabetes
(NIDDM) or Type II diabetes. Type II diabetes is a heterogenous group of